

BACKGROUND OF THE INVENTION

The present application is a DIV application of U.S. Patent Application No. 10/022,759, filed December 13, 2001, now US Patent No. 6,677,912.
Field of the Invention

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5 This invention relates to conductive elements for antennas and, more particularly, to a conductive element allowing improved log-periodic dipole array performance.

Description of the Related Art

10 The following descriptions and examples are not admitted to be prior art by virtue of their inclusion within this section.

Log-periodic dipole array (LPDA) antennas are popular broadband antennas for many applications. An LPDA includes an array of electric dipoles having varying length
15 extending outward from a pair of feed conductors. The pairs of elements are arranged from shortest to longest, with both the element length and the spacing between elements varying logarithmically along the antenna. The LPDA is a type of "quasi-frequency-independent" antenna, having relatively constant radiation pattern and input impedance characteristics over a frequency range extending (approximately) from the half-
20 wavelength frequency of the longest dipole to the half-wavelength frequency of the shortest dipole.

The LPDA is typically oriented during use such that the end with the shortest elements is pointed in the desired direction of transmission or reception. Furthermore,
25 the antenna is generally designed to be fed at the end with the short elements. These practices help to avoid pattern distortions by reducing effects such as shadowing, reflections, and excitation of harmonics in the longer elements. The feeding at the front end (the short-element end) of the antenna is typically accomplished by running a coaxial feed line along the interior of one of the conductors to which the antenna elements are
30 connected. In this way, the feed signal can be brought to the front of the antenna, while